

ETL 1110-3-394

27 Sep 91

Aircraft Manufacturer Rockwell International

Aircraft Engine Manufacturer General Electric (F101-GE-102)

No. of Engines 4 Engine Rating 30,750 lb

Min. T/O Wt. 189.0 k-lb * Min. T/O Dist. @ Min. T/O Wt. 1,500 ft

* Min. T/O Dist. @ Min. T/O Wt. With Abort Dist. 1,800 ft

Max. T/O Wt. Peace-Time 440.0 k-lb Max. T/O Wt. War-Time 477.0 k-lb

* Min. T/O Dist. @ Max. T/O Wt. War-Time 10,200 ft

* Min. T/O Dist. @ Max. T/O Wt. War-Time With Abort Dist. 12,150 ft

Min. Ldg. Wt. 270.0 k-lb Max. Ldg. Wt. 346.5 k-lb

* Min. Ldg. Dist. @ Min. Ldg. Wt. 4,000 ft

* Min. Ldg. Dist. @ Max. Ldg. Wt. 4,950 ft

* These distances are at 59°F, at sea level, with zero runway gradient, and on a clean dry runway surface.

ACN

Weight	Rigid Pavement Subgrades				Flexible Pavement Subgrades			
	High		Medium	Low	Ultra Low	High		Low
	<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>	<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>
270	30	35	41	46	28	32	39	53
347	42	50	58	65	41	46	57	75
440	58	69	80	89	59	66	82	102
477	65	78	90	99	66	75	93	112

Figure A-1. B-1B

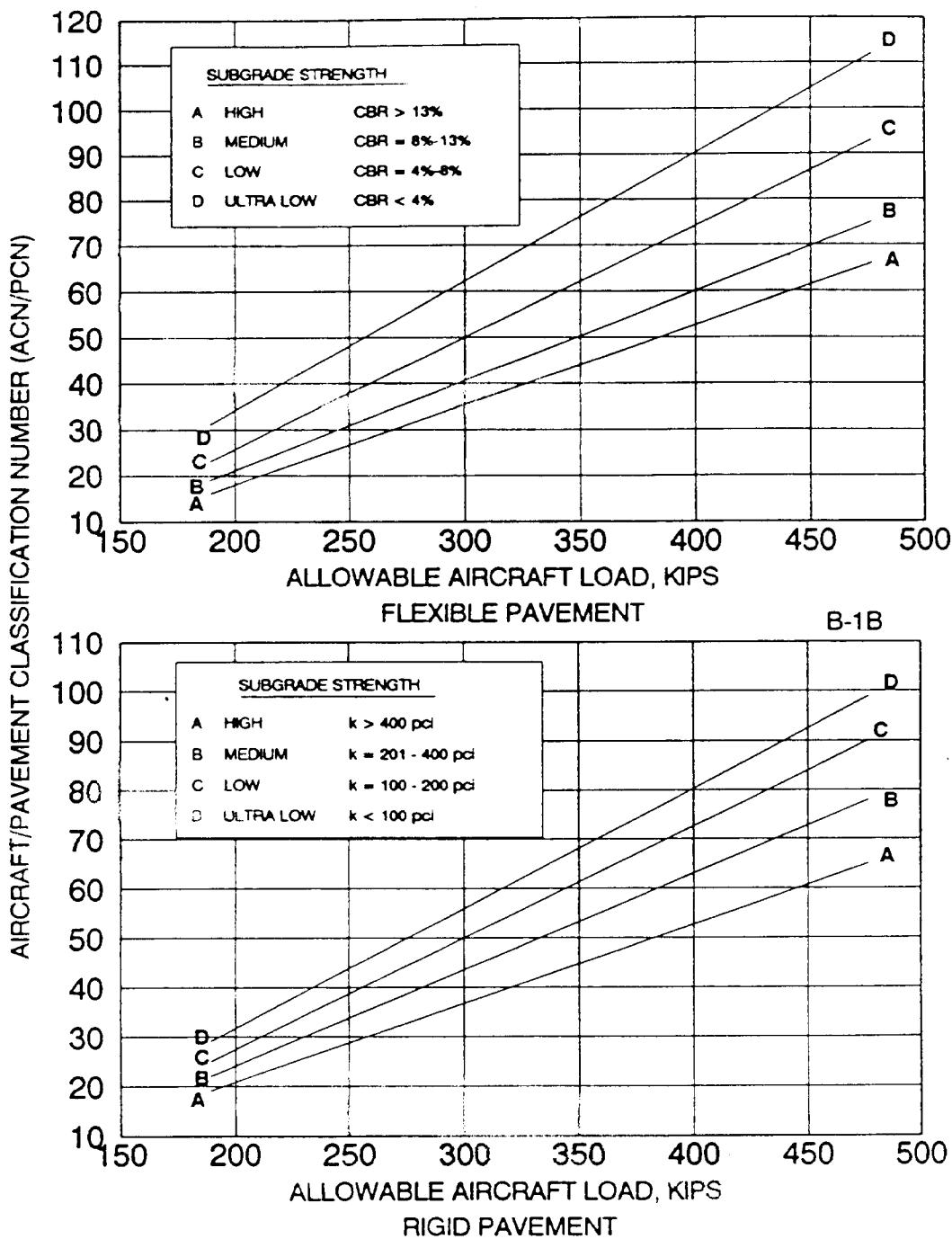


Figure A-2. B-1B, ACN/PCN Curves

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Aircraft Manufacturer Boeing

Aircraft Engine Manufacturer Pratt and Whitney (J57-43WB)

No. of Engines 8 Engine Rating 13,750 lb

Min. T/O Wt. 230.0 k-lb * Min. T/O Dist. @ Min. T/O Wt. 1,900 ft

* Min. T/O Dist. @ Min. T/O Wt. With Abort Dist. 5,600 ft

Max. T/O Wt. Peace-Time 488.0 k-lb Max. T/O Wt. War-Time 488.0 k-lb

* Min. T/O Dist. @ Max. T/O Wt. War-Time 8,010 ft

* Min. T/O Dist. @ Max. T/O Wt. War-Time With Abort Dist. 9,590 ft

Min. Ldg. Wt. 192.0 k-lb Max. Ldg. Wt. 450.0 k-lb

* Min. Ldg. Dist. @ Min. Ldg. Wt. 3,100 ft

* Min. Ldg. Dist. @ Max. Ldg. Wt. 8,500 ft

* These distances are at 59°F, at sea level, with zero runway gradient, and on a clean dry runway surface.

ACN

Weight	Rigid Pavement Subgrades				Flexible Pavement Subgrades			
	High A	Medium B	Low C	Ultra Low D	High A	Medium B	Low C	Very Low D
	192	29	32	36	39	19	22	26
450	89	100	111	118	70	75	85	101
488	100	112	123	131	78	84	94	113

Figure A-3. B-52G, Stratofortress

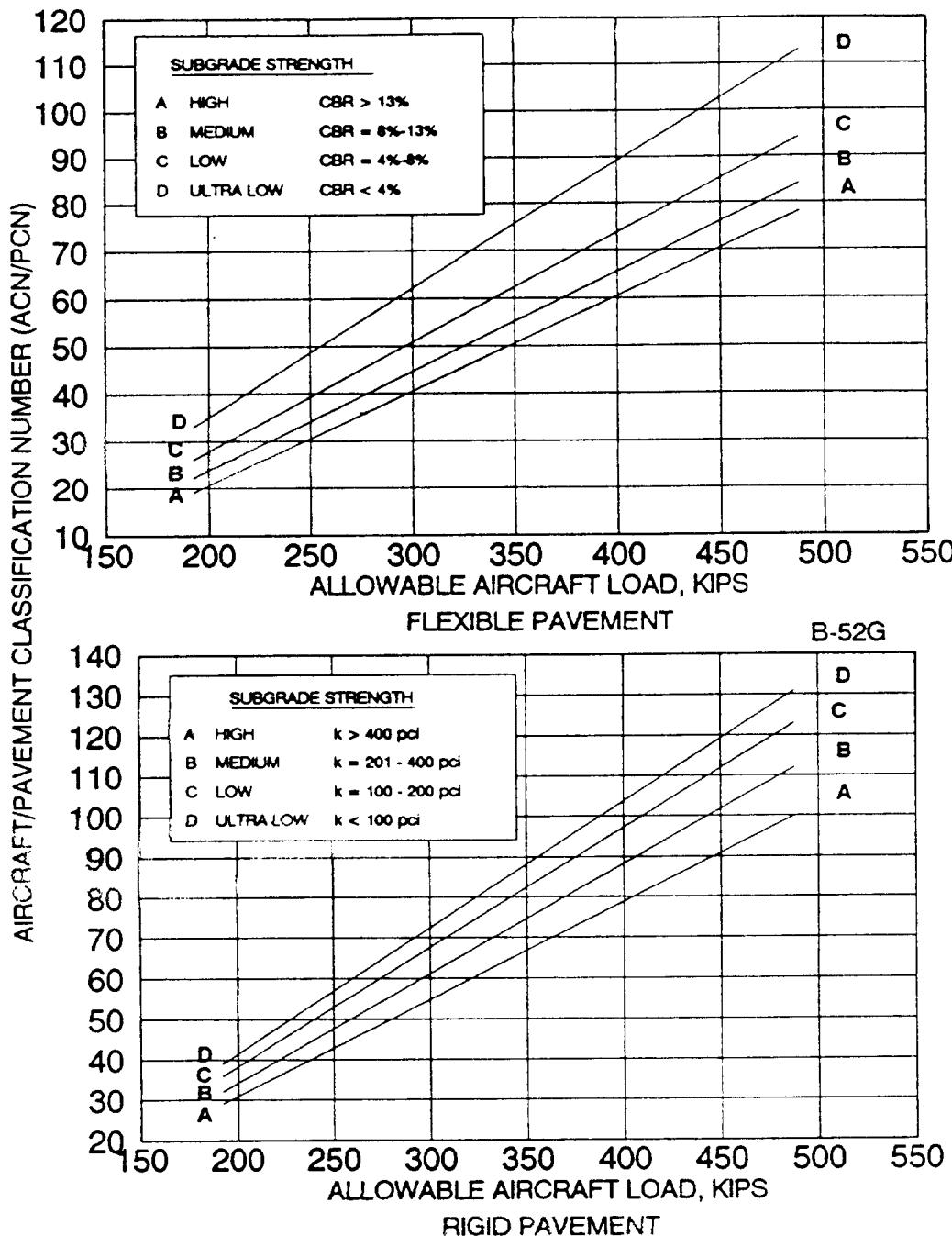


Figure A-4. B-52G, ACN/PCN Curves

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Aircraft Manufacturer Boeing

Aircraft Engine Manufacturer Pratt and Whitney (TF33-P-3)

No. of Engines 8 Engine Rating 17,000 lb

Min. T/O Wt. 230.0 k-lb * Min. T/O Dist. @ Min. T/O Wt. 2,400 ft
(reduced thrust)

* Min. T/O Dist. @ Min. T/O Wt. With Abort Dist. 6,500 ft

Max. T/O Wt. Peace-Time 488.0 k-lb Max. T/O Wt. War-Time 488.0 k-lb

* Min. T/O Dist. @ Max. T/O Wt. War-Time 7,450 ft

* Min. T/O Dist. @ Max. T/O Wt. War-Time With Abort Dist. 8,490 ft

Min. Ldg. Wt. 196.4 k-lb Max. Ldg. Wt. 450.0 k-lb

* Min. Ldg. Dist. @ Min. Ldg. Wt. 3,550 ft

* Min. Ldg. Dist. @ Max. Ldg. Wt. 8,800 ft

* These distances are at 59°F, at sea level, with zero runway gradient, and on a clean dry runway surface.

ACN

Weight	Rigid Pavement Subgrades				Flexible Pavement Subgrades			
	Ultra		High A	Medium B	Low C	Low D	Very	
	High A	Medium B					High A	Medium B
196	30	33	37	40	20	23	27	34
450	89	100	111	118	70	75	85	101
488	100	112	123	131	78	84	94	113

Figure A-5. B-52H, Stratofortress

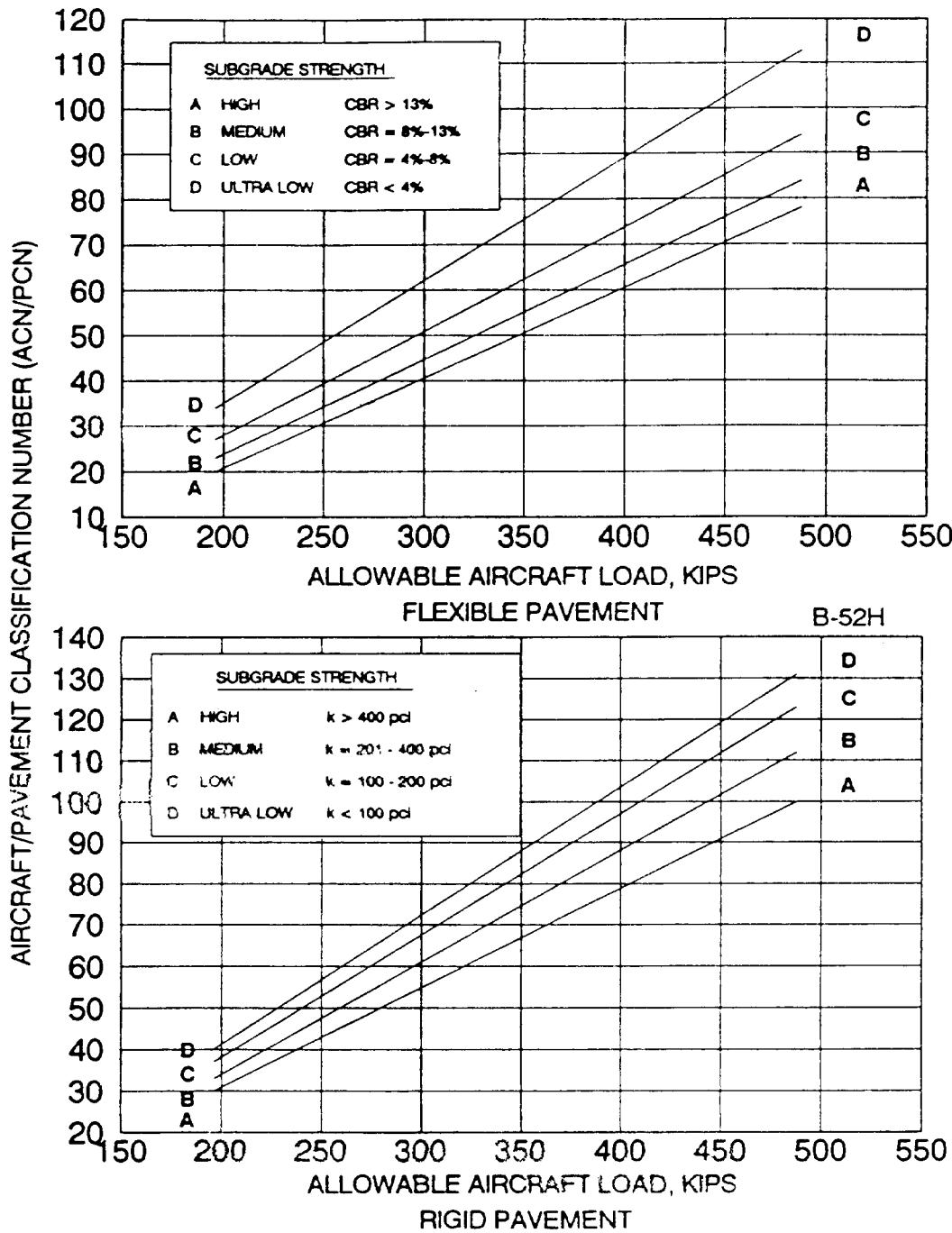


Figure A-6. B-52H, ACN/PCN Curves

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Aircraft Manufacturer General Dynamics

Aircraft Engine Manufacturer Pratt and Whitney (TF30-P-7)

No. of Engines 2 Engine Rating 20,350 lb

Min. T/O Wt. 57.5 k-lb * Min. T/O Dist. @ Min. T/O Wt. 1,000 ft

* Min. T/O Dist. @ Min. T/O Wt. With Abort Dist. 4,200 ft

Max. T/O Wt. Peace-Time 114.3 k-lb Max. T/O Wt. War-Time 114.3 k-lb

* Min. T/O Dist. @ Max. T/O Wt. War-Time 6,200 ft

* Min. T/O Dist. @ Max. T/O Wt. War-Time With Abort Dist. 12,900 ft

Min. Ldg. Wt. 52.0 k-lb Max. Ldg. Wt. 114.3 k-lb

* Min. Ldg. Dist. @ Min. Ldg. Wt. 1,800 ft

* Min. Ldg. Dist. @ Max. Ldg. Wt. 6,700 ft

* These distances are at 59°F, at sea level, with zero runway gradient, and on a clean dry runway surface.

ACN

Weight	Rigid Pavement Subgrades				Flexible Pavement Subgrades			
	High A	Medium B	Low C	Ultra Low D	High A	Medium B	Low C	Very Low D
52	16	17	17	18	19	21	22	23
114	53	53	52	51	56	55	54	54

Figure A-7. FB-111A

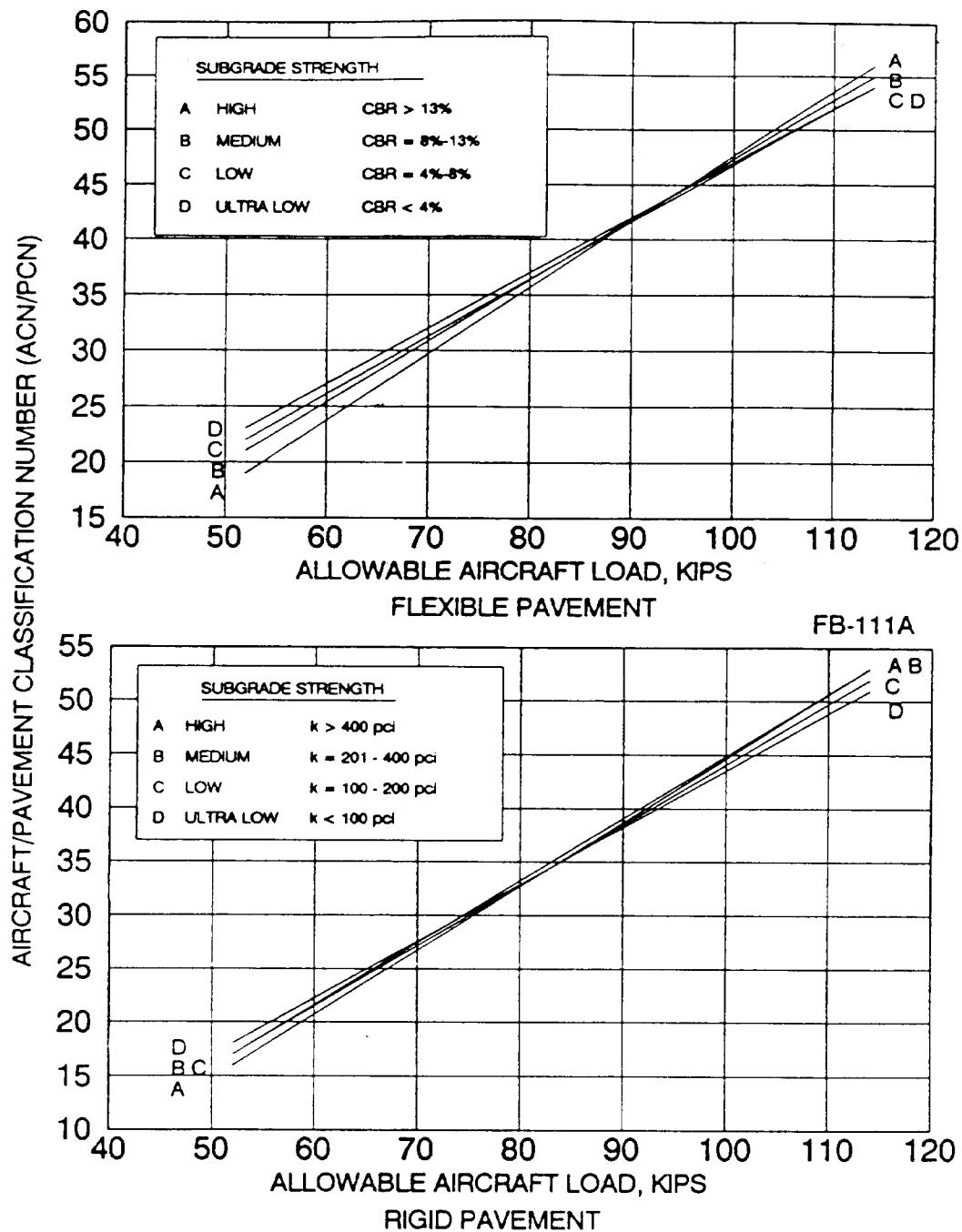


Figure A-8. FB-111A, ACN/PCN Curves

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Aircraft Manufacturer Lockheed

Aircraft Engine Manufacturer General Electric (TF39-GE-1A on C-5A)
(TF39-GE-1C on C-5B)

No. of Engines 4 Engine Rating 41,000 lb (TF39-GE-1A)
43,000 lb (TF39-GE-1C)

Min. T/O Wt. 375.0 k-lb * Min. T/O Dist. @ Min. T/O Wt. 1,580 ft

* Min. T/O Dist. @ Min. T/O Wt. With Abort Dist. 2,300 ft

Max. T/O Wt. Peace-Time 769.0 k-lb Max. T/O Wt. War-Time 837.0 k-lb

* Min. T/O Dist. @ Max. T/O Wt. War-Time 10,000 ft

* Min. T/O Dist. @ Max. T/O Wt. War-Time With Abort Dist. 11,500 ft

Min. Ldg. Wt. 635.9 k-lb Max. Ldg. Wt. 769.0 k-lb

* Min. Ldg. Dist. @ Min. Ldg. Wt. 2,250 ft

* Min. Ldg. Dist. @ Max. Ldg. Wt. 3,400 ft

* These distances are at 59°F, at sea level, with zero runway gradient, and on a clean dry runway surface.

ACN

Weight	Rigid Pavement Subgrades				Flexible Pavement Subgrades			
					Very			
	High A	Medium B	Low C	Low D	High A	Medium B	Low C	Low D
636	20	23	27	33	25	30	38	56
769	26	29	35	43	33	38	49	72
837	29	32	39	48	37	42	55	80

Figure A-9. C-5A/B, Galaxy

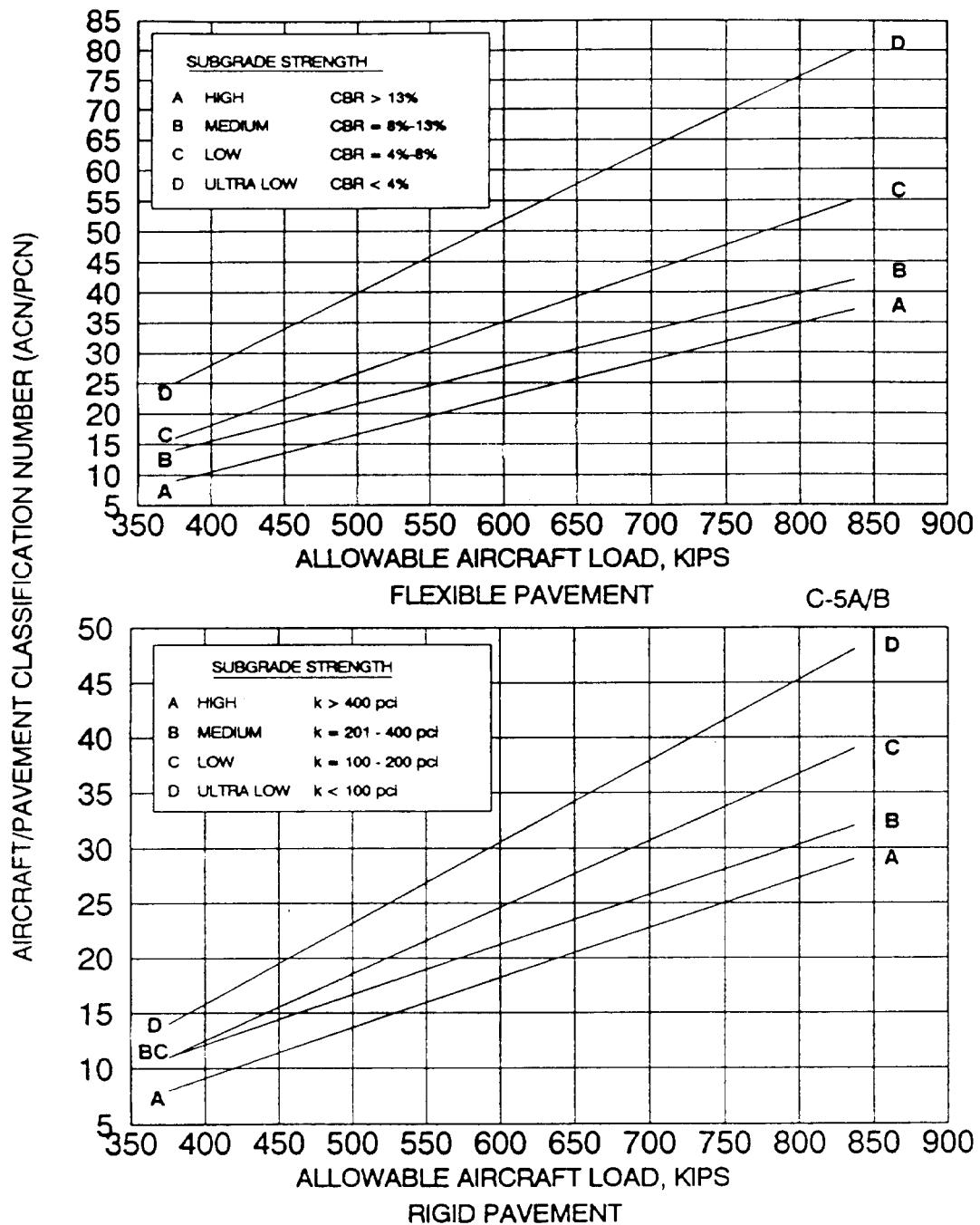


Figure A-10. C-5A/B, ACN/PCN Curves

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Aircraft Manufacturer De Havilland Canada

Aircraft Engine Manufacturer Pratt and Whitney (R2000-7M2)

No. of Engines 2 Engine Rating 1,450 BHP

Min. T/O Wt. 19.6 k-lb * Min. T/O Dist. @ Min. T/O Wt. 560 ft

* Min. T/O Dist. @ Min. T/O Wt. With Abort Dist. †

Max. T/O Wt. Peace-Time 28.5 k-lb Max. T/O Wt. War-Time 28.5 k-lb

* Min. T/O Dist. @ Max. T/O Wt. War-Time 1,190 ft

* Min. T/O Dist. @ Max. T/O Wt. War-Time With Abort Dist. †

Min. Ldg. Wt. 19.6 k-lb Max. Ldg. Wt. 28.5 k-lb

* Min. Ldg. Dist. @ Min. Ldg. Wt. 870 ft

* Min. Ldg. Dist. @ Max. Ldg. Wt. 1,240 ft

* These distances are at 59°F, at sea level, with zero runway gradient, and on a clean dry runway surface.

ACN

Weight	Rigid Pavement Subgrades				Flexible Pavement Subgrades			
	High A	Medium B	Low C	Ultra D	High A	Medium B	Low C	Very Low D
20	4	4	4	4	3	3	3	4
29	5	5	6	6	5	5	5	7

Figure A-11. C-7A, Caribou

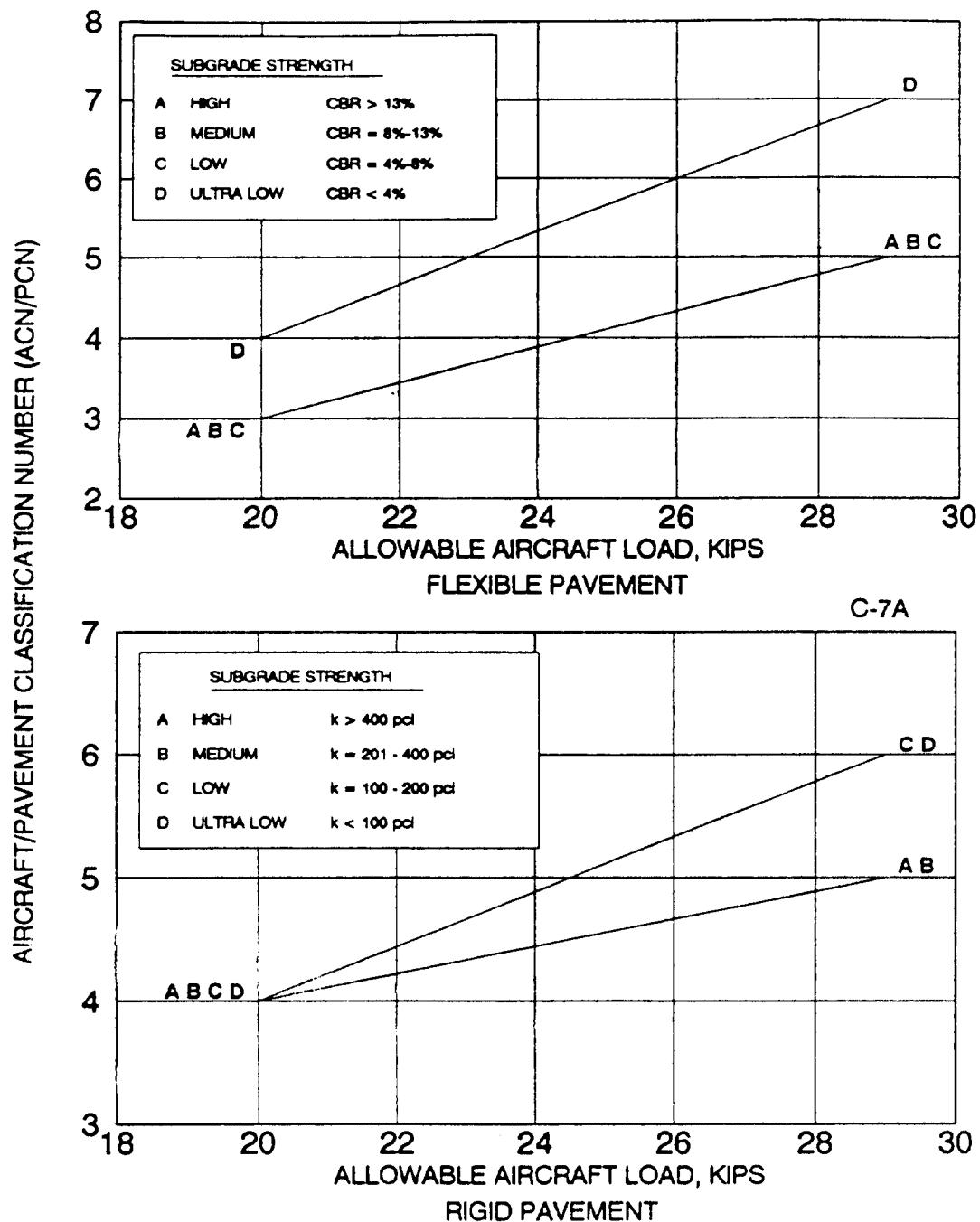


Figure A-12. C-7A, ACN/PCN Curves

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Aircraft Manufacturer McDonnell Douglas

Aircraft Engine Manufacturer Pratt and Whitney (JT8D-9A)

No. of Engines 2 Engine Rating 14,500 lb

Min. T/O Wt. 70.0 k-lb * Min. T/O Dist. @ Min. T/O Wt. 1,900 ft

* Min. T/O Dist. @ Min. T/O Wt. With Abort Dist. 2,600 ft

Max. T/O Wt. Peace-Time 108.0 k-lb Max. T/O Wt. War-Time 108.0 k-lb

* Min. T/O Dist. @ Max. T/O Wt. War-Time 4,600 ft

* Min. T/O Dist. @ Max. T/O Wt. War-Time With Abort Dist. 5,800 ft

Min. Ldg. Wt. 80.0 k-lb Max. Ldg. Wt. 99.0 k-lb

* Min. Ldg. Dist. @ Min. Ldg. Wt. 2,200 ft

* Min. Ldg. Dist. @ Max. Ldg. Wt. 2,800 ft

* These distances are at 59°F, at sea level, with zero runway gradient, and on a clean dry runway surface.

ACN

Weight	Rigid Pavement Subgrades				Flexible Pavement Subgrades			
	High A	Medium B	Low C	Ultra Low D	High A	Medium B	Low C	Very Low D
80	19	21	22	23	18	20	23	26
99	26	28	29	30	24	27	30	34
108	29	31	33	33	27	30	34	38

Figure A-13. C-9A, Nightingale

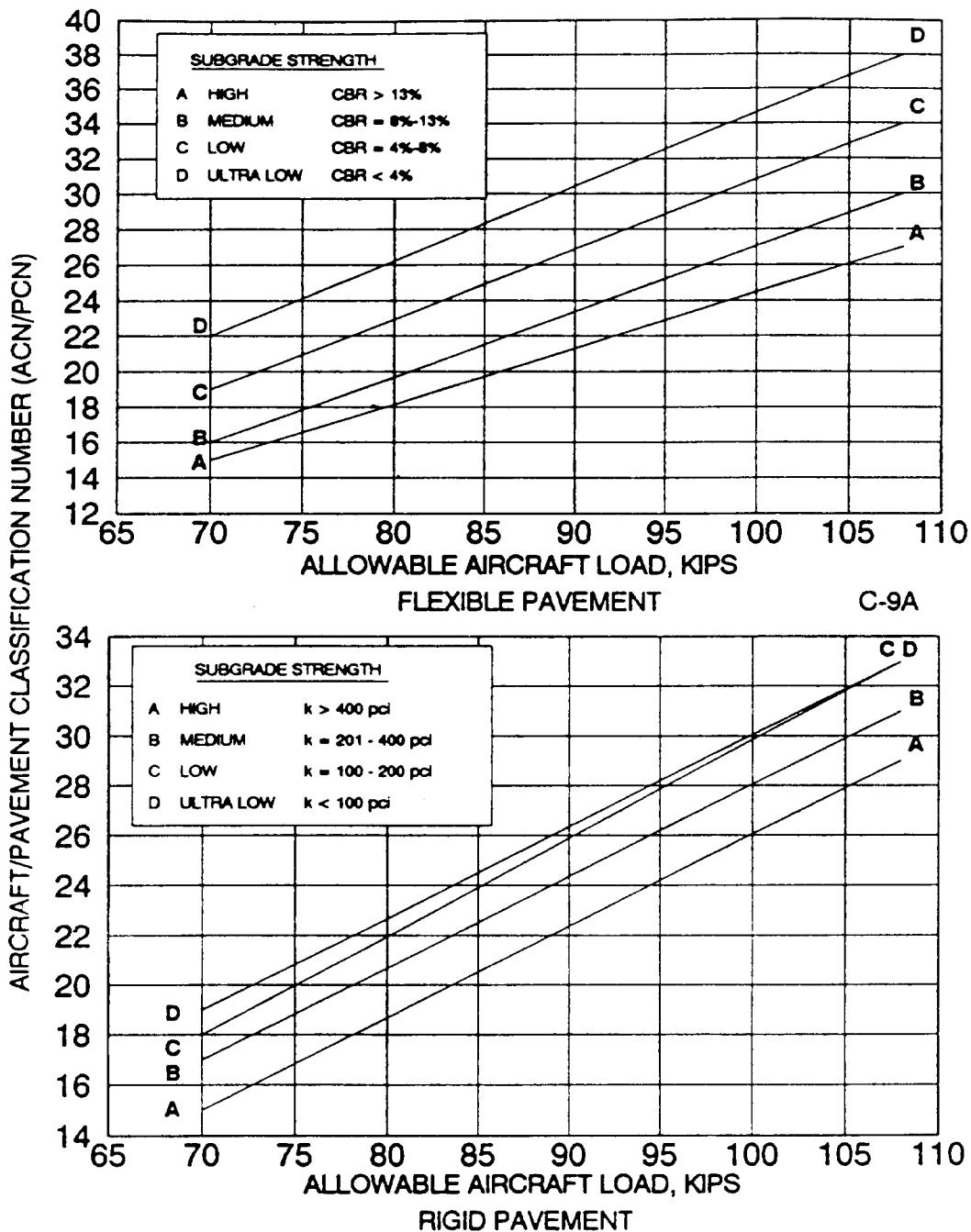


Figure A-14. C-9A, ACN/PCN Curves

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Aircraft Manufacturer Beech

Aircraft Engine Manufacturer Pratt and Whitney (PT6A-38)

No. of Engines 2 Engine Rating 750 SHP

Min. T/O Wt. 9.5 k-lb * Min. T/O Dist. @ Min. T/O Wt. 3,000 ft

* Min. T/O Dist. @ Min. T/O Wt. With Abort Dist. 4,000 ft

Max. T/O Wt. Peace-Time 12.5 k-lb Max. T/O Wt. War-Time 12.5 k-lb

* Min. T/O Dist. @ Max. T/O Wt. War-Time 4,200 ft

* Min. T/O Dist. @ Max. T/O Wt. War-Time With Abort Dist. 5,600 ft

Min. Ldg. Wt. 9.5 k-lb Max. Ldg. Wt. 12.5 k-lb

* Min. Ldg. Dist. @ Min. Ldg. Wt. 3,000 ft

* Min. Ldg. Dist. @ Max. Ldg. Wt. 3,600 ft

* These distances are at 59°F, at sea level, with zero runway gradient, and on a clean dry runway surface.

ACN

Weight	Rigid Pavement Subgrades				Flexible Pavement Subgrades			
			Ultra				Very	
	High A	Medium B	Low C	Low D	High A	Medium B	Low C	Low D
10	2	2	2	2	1	2	2	2
13	3	3	3	3	2	3	3	3

Figure A-15. C-12A, Huron

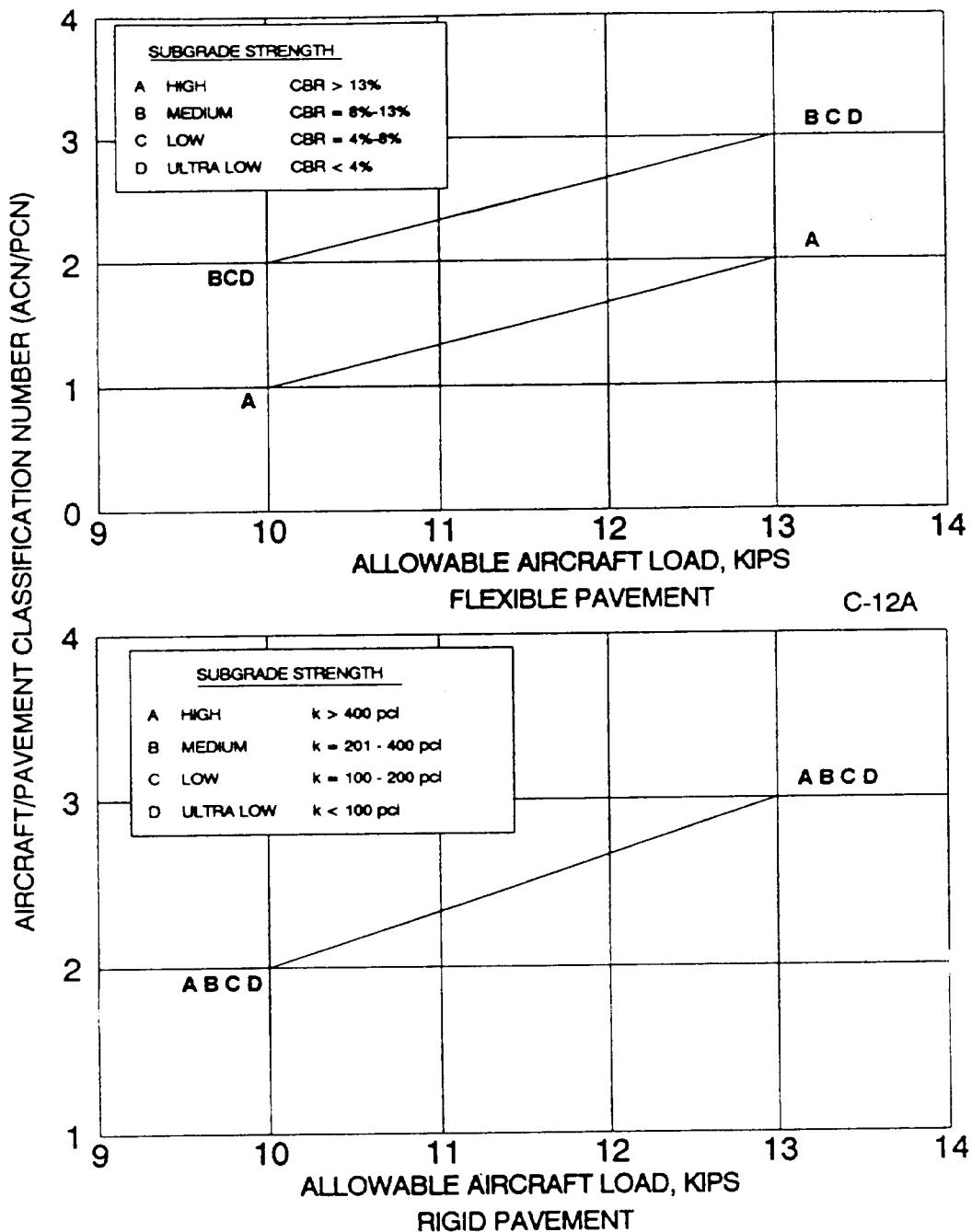


Figure A-16. C-12A, ACN/PCN Curves

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Aircraft Manufacturer BeechAircraft Engine Manufacturer Pratt and Whitney (PT6A-41)No. of Engines 2 Engine Rating 850 SHPMin. T/O Wt. 9.5 k-lb * Min. T/O Dist. @ Min. T/O Wt. 3,000 ft* Min. T/O Dist. @ Min. T/O Wt. With Abort Dist. 4,000 ftMax. T/O Wt. Peace-Time 12.5 k-lb Max. T/O Wt. War-Time 12.5 k-lb* Min. T/O Dist. @ Max. T/O Wt. War-Time 4,200 ft* Min. T/O Dist. @ Max. T/O Wt. War-Time With Abort Dist. 5,600 ftMin. Ldg. Wt. 9.5 k-lb Max. Ldg. Wt. 12.5 k-lb* Min. Ldg. Dist. @ Min. Ldg. Wt. 3,000 ft* Min. Ldg. Dist. @ Max. Ldg. Wt. 3,600 ft

* These distances are at 59°F, at sea level, with zero runway gradient, and on a clean dry runway surface.

ACN

Weight	Rigid Pavement Subgrades				Flexible Pavement Subgrades			
	High		Medium	Low	Ultra Low	High		Low
	A	B	C	D	A	B	C	D
10	2	2	2	2	2	1	2	2
13	3	3	3	3	3	2	3	3

Figure A-17. C-12C/D, Huron

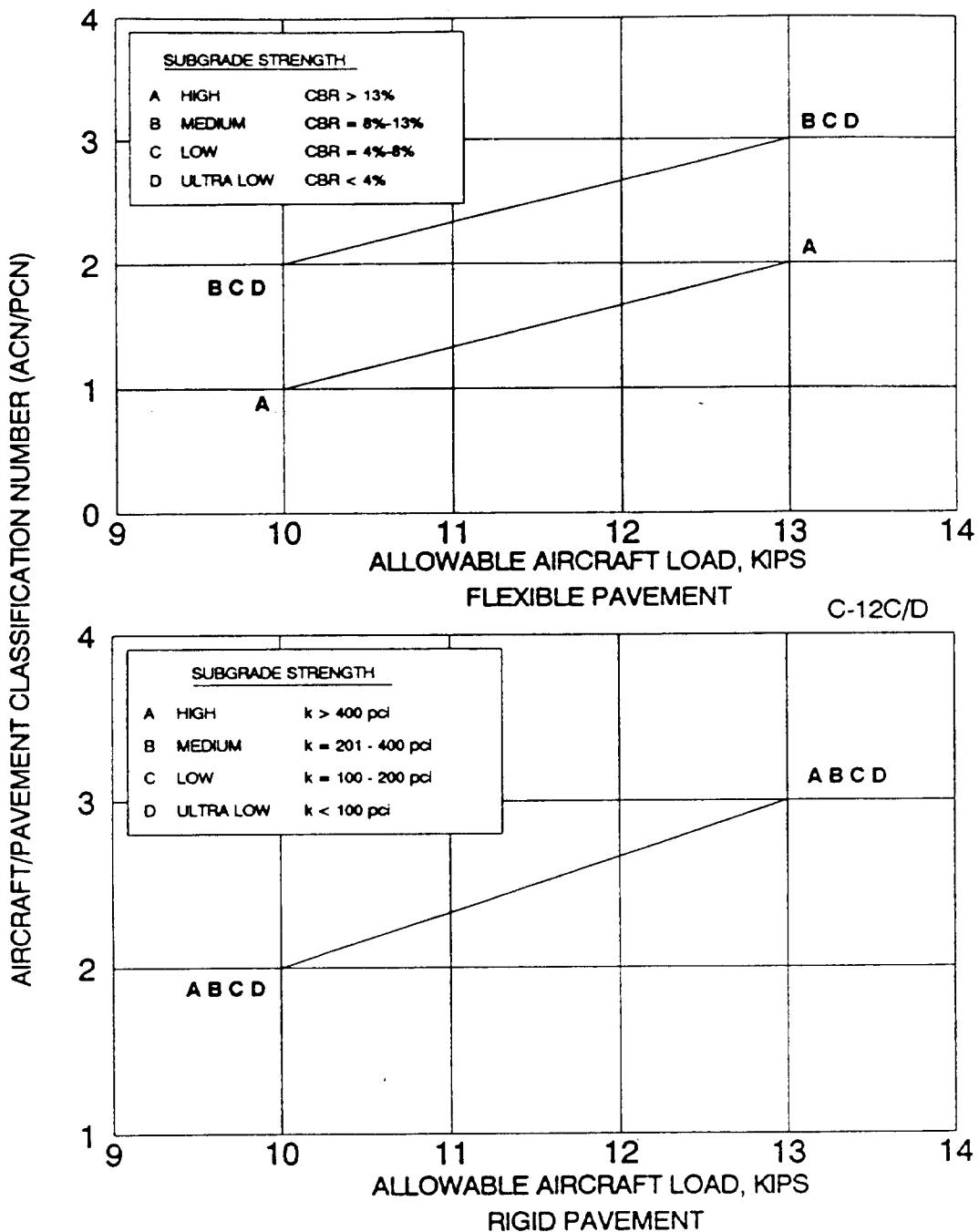


Figure A-18. C-12C/D, ACN/PCN Curves

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Aircraft Manufacturer Beech

Aircraft Engine Manufacturer Pratt and Whitney (PT6A-42)

No. of Engines 2 Engine Rating 850 SHP

Min. T/O Wt. 10.0 k-lb * Min. T/O Dist. @ Min. T/O Wt. 2,500 ft

* Min. T/O Dist. @ Min. T/O Wt. With Abort Dist. 4,400 ft

Max. T/O Wt. Peace-Time 12.5 k-lb Max. T/O Wt. War-Time 14.0 k-lb

* Min. T/O Dist. @ Max. T/O Wt. War-Time 5,000 ft

* Min. T/O Dist. @ Max. T/O Wt. War-Time With Abort Dist. 6,100 ft

Min. Ldg. Wt. 9.5 k-lb Max. Ldg. Wt. 12.5 k-lb

* Min. Ldg. Dist. @ Min. Ldg. Wt. 3,200 ft

* Min. Ldg. Dist. @ Max. Ldg. Wt. 3,800 ft

* These distances are at 59°F, at sea level, with zero runway gradient, and on a clean dry runway surface.

ACN

Weight	Rigid Pavement Subgrades				Flexible Pavement Subgrades			
			Ultra				Very	
	High A	Medium B	Low C	Low D	High A	Medium B	Low C	Low D
10	2	2	2	2	1	2	2	2
13	3	3	3	3	2	3	3	3
14	3	3	3	3	2	3	3	3

Figure A-19. C-12F, Huron

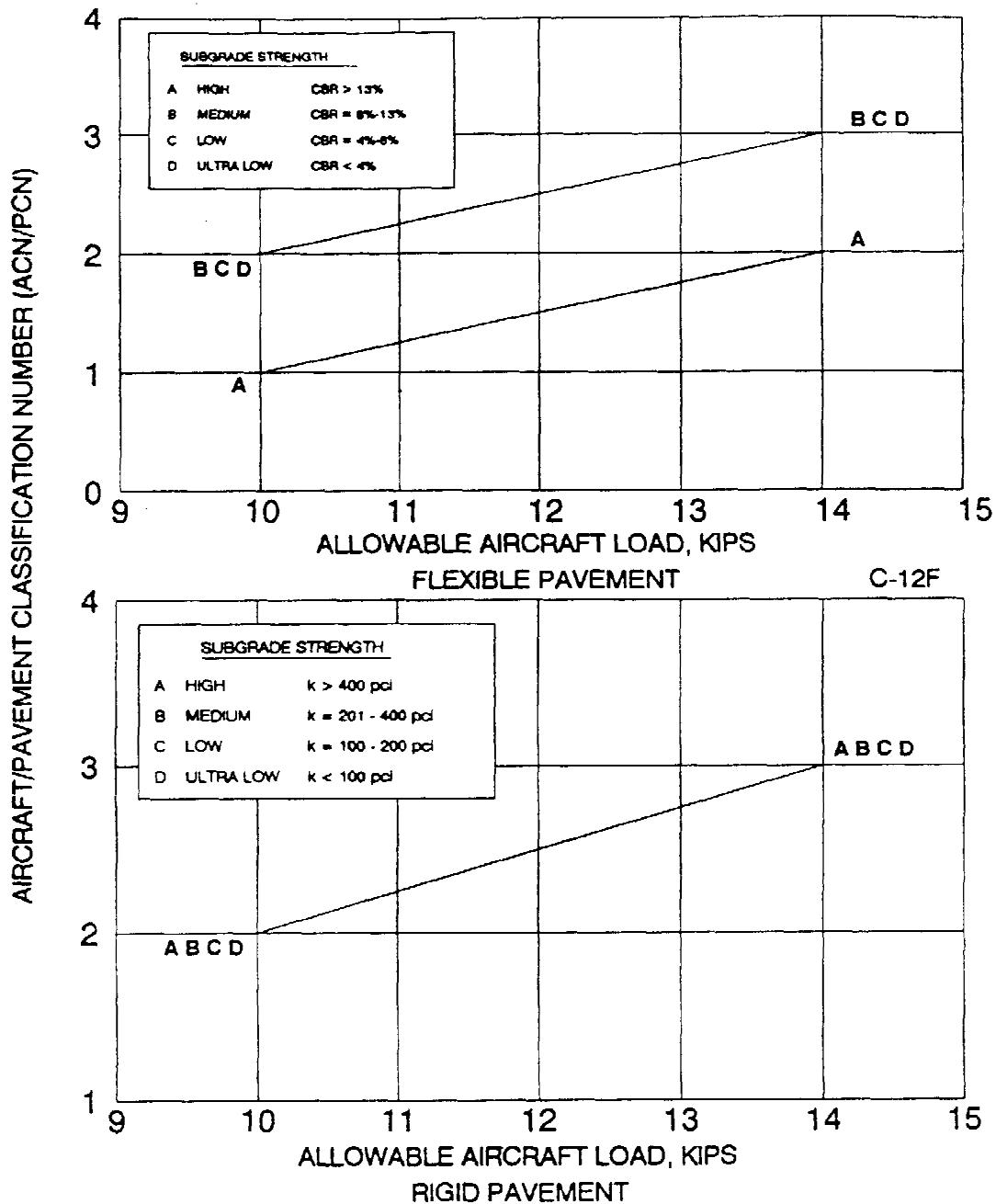


Figure A-20. C-12F, ACN/PCN Curves

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Aircraft Manufacturer Beech

Aircraft Engine Manufacturer Pratt and Whitney (PT6A-65B)

No. of Engines 2 Engine Rating 1100 SHP

Min. T/O Wt. 9.57 k-lb * Min. T/O Dist. @ Min. T/O Wt. 2,300 ft

* Min. T/O Dist. @ Min. T/O Wt. With Abort Dist. 3,400 ft

Max. T/O Wt. Peace-Time 16.6 k-lb Max. T/O Wt. War-Time 16.6 k-lb

* Min. T/O Dist. @ Max. T/O Wt. War-Time 3,600 ft

* Min. T/O Dist. @ Max. T/O Wt. War-Time With Abort Dist. 4,300 ft

Min. Ldg. Wt. 10.65 k-lb Max. Ldg. Wt. 16.1 k-lb

* Min. Ldg. Dist. @ Min. Ldg. Wt. 3,000 ft

* Min. Ldg. Dist. @ Max. Ldg. Wt. 3,700 ft

* These distances are at 59°F, at sea level, with zero runway gradient, and on a clean dry runway surface.

ACN

Weight	Rigid Pavement Subgrades				Flexible Pavement Subgrades			
	High A	Medium B	Low C	Ultra Low D	High A	Medium B	Low C	Very Low D
11	2	2	2	2	1	2	2	2
16	4	4	4	5	3	4	4	5
17	4	4	4	5	3	4	4	5

Figure A-21. C-12J, Huron